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Short communication — Kurze Mitteilung — En bref

Migration of the African Monarch *Danaus chrysippus* (L.) and the African Migrant *Catopsilia florella* (Fabr.) in Mauretania (Lepidoptera : Danaidae, Pieridae)

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Summary

A northerly migration of *D. chrysippus* f. *alcippus* and *Catopsilia florella* was observed in Mauretania in March 1992. This finding supports the view that the two forms of *D. chrysippus* present on the Canary Islands, *alcippus* and *aegyptius*, have separate origins, from western Africa and Egypt respectively. These two migrant species could colonise Europe if global warming occurs.

Résumé

Des mouvements récents de *D. chrysippus* ont été notés au cours de ces dernières années en Afrique du Nord. Une migration vers le nord de *D. chrysippus* f. *alcippus* et de *Catopsilia florella* a été observée en Mauritanie en mars 1992. Ce mouvement suggère l'idée d'une origine distincte des deux formes *alcippus* et *aegyptius* que l'on trouve dans les Iles Canaries. La forme *alcippus* proviendrait de populations d'Afrique de l'ouest alors que la forme *aegyptius* serait issue de l'Egypte ou de colonies algériennes, elles-mêmes provenant de ce pays. Une expansion vers le nord de *D. chrysippus* est possible et pourrait, si certaines conditions venaient à être réunies, conduire à une colonisation permanente de l'Europe.

Danaus chrysippus L. has been known to humanity for at least three and a half thousand years, as witnessed by the first known drawing of a butterfly in Luxor (Larsen, 1977). It is widely distributed in Africa, South-East Asia and Australia, and is well-known for its migratory behaviour. The African Monarch may well have originated in South-East Asia and spread from there to Africa (Pierre, 1980).

Eight overlapping forms exist ; among these we find : *aegyptius*, the most common form, and *alcippus*, confined to western Africa (Smith, 1975). The African Monarch or Plain Tiger feeds on various milkweeds (Asclepiadaceae) which confer to it some form of protection from predators. This is supported by the existence of various batesian mimics which have *D. chrysippus* as a model.

Recently, Samraoui & Benyacoub (1991) reported a large migration in Algeria of the form *aegyptius* going in an east-west direction and probably originating from Egypt, where this form is known to breed. They also reported (Samraoui *et al.*, 1992) possible breeding colonies in southern Algeria and suggested these colonies as a source of colonisation of the Canary Islands and southern Spain. The presence of *D. chrysippus* in Algeria is probably ancient and may have simply gone unnoticed. A specimen dated from 1975 and captured in Tebessa (eastern Algeria) from the I.N.P.V. collection (Algiers) supports this hypothesis.

Both forms (*aegyptius* and *alcippus*) are known to occur in the Canary Islands with the larval foodplant being listed as *Carralluma burchardii*, an endemic plant to Fuerteventura (Owen & Wiemers, 1992) and *Gomphocarpus fruticosis* (Schmitz, 1990). The larval foodplant reported from Spain is *Asclepias curassavica* (Bretherton, 1984). All three plants belong to the Asclepiadaceae.

The population of *D. chrysippus* in the Canary Islands could only have originated from north-west Africa. The African Monarch is able to cross the Sahara Desert (Samraoui *et al.*, 1992) and in March 1992, we observed a migration of the *alcippus* form going northwards to Nouakchott. A week later, near Rosso, on the northern bank of the Senegal River, hundreds of specimens were seen. However, no oriented movement was noticed. Both in Nouakchott and near Rosso, the candidate larval foodplant *Calotropis procera* (Asclepiadaceae) is abundant. Moreover, both forms are common in Morocco (Tennent, pers. comm.). Separate origins of these two forms in Morocco and in the Canary Islands (Larsen, 1986) is the most plausible explanation for their present distribution.

In Nouakchott, pierids were also seen migrating northwards with a vigorous and sustained flight. A female captured proved to be *Catopsilia florella* (Fabr.). The African Migrant, as its name indicates, is known for its large scale migration which it undertakes periodically (Larsen, 1992 ; Migdoll, 1992). The female caught is of the sulphur-yellow type, the most common form. Two other forms are known: *pyrene* and *hyblaea* (Migdoll, 1992). The known foodplants are *Cassa* spp.

Both the African Monarch and the African Migrant are able to cross desert and large stretches of water. If larval foodplants were to become available and if a trend towards a global warming is confirmed, it would not be surprising to find these two species gaining a strong foothold in Europe (Owen, 1992).

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